REMARKS

Claims 1-8 are pending in this application. In the proposed amendment, new claim 8 has been added.

Support for claim 8 may be found in the specification on page 12, lines 6-8.

Claims 1 and 3(1)-5(1) are rejected under 35 U.S.C. §103(a) as being unpatentable over Kawaguchi et al. (U.S. Patent No. 5,885,490) (Office action paragraph no. 2).

Reconsideration of the rejection is respectfully requested.

The present invention is characterized by a continuous release sheet of a curable resin satisfying:

(a) transcriptional properties, i.e., heat resistance in the specific test conditions, and

(b) mechanical properties, i.e., windability in a form of cylinder of the specific inches in diameter.

When even either of these requirements (a) and (b) is not satisfied, the intended continuous sheet having a three-dimensional pattern providing optical functions cannot be provided, as is apparent not only from examples and comparative examples, but also from the Declaration dated March 5, 2003 by Mr. Kosugi, so that the curable resin release sheet without (a) or (b) cannot be practiced industrially and commercially.

In contrast, attention should be paid to the point that Kawaguchi et al. is doggedly directed to a thermoplastic release sheet, and that a curable resin release sheet is prepared **only by the use**

of a thermoplastic release sheet having a three-dimensional pattern which was produced by extruding a molten thermoplastic resin into the space between an embossing roll and a press roll, as mentioned on col. 3, lines 45-48: "it is possible to use a release sheet made of a composition curable by heat or light by being embossed **by the use of a release sheet prepared by the above methods**" (emphasis added). That is, Kawaguchi does no more than teach solely how to solve the problem of heat resistance involved in a thermoplastic release sheet.

In contrast, in the present invention, the release sheet is made by applying a curable resin not only on a thermoplastic sheet having a three-dimensional pattern, but **also** on a metallic embossing roll having said pattern. Kawaguchi et al. only refers to a release sheet of a curable resin as a general and additional explanation to the thermoplastic release sheet to which Kawaguchi el al. is directed.

Furthermore, Kawaguchi et al. naturally neither suggests nor contemplates the foregoing industrially and commercially operational conditions and those conditions are not suggested by the general teachings by Kawaguchi et al.

Applicants submit that the present invention has clear advantages in practice over Kawaguchi et al., and that claims 1 and 3(1)-5(1) are novel and non-obvious over Kawaguchi et al.

Claims 2, 3(2)-5(2) and 6 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kawaguchi et al. as applied to claim 1 above, and further in view of Gray, III et al. (U.S. Patent No. 4,322,450) (Office action paragraph no. 3).

Reconsideration of the rejection is respectfully requested.

The difference between the present invention and Gray III et al. is summarized below:

	Gray III et al.	Present invention
Object	Replication of very fine patterns in the release paper such as wood grain and leather grain (Col. 3, lines 67-68)	Transference of three-dimensional patterns such as prism type, lenticular lens type, pyramids, downward hemispheres, etc (page 15, lines 1-12)
Substrate	Paper (Claim 1) having the proper porosity (Col. 4, line 19)	Unevenness on the surface is not suitable. A synthetic resin and a metallic foil is suitable (Page 13, lines 5-8)
Final product	Surface replication in a release coating on a substrate (Replication is provided by a replicative surface such as an engraved roll.)	Composite release sheet comprising a curable resin and a substrate is not a final product and transfers the pattern on the curable resin to a thermoplastic resin.

As is apparent from the foregoing, the present invention and that of Gray III et al. are essentially different from each other, especially in the respect of the substrate.

That is, in Gray III et al., as a substrate paper having the proper porosity is used because the coating is allowed to penetrate into the paper (Claim 1, section C; col. 4, lines 19-21; col. 5, lines 50-55), while the substrate used in the present invention and Kawaguchi et al. should not have such porosity since unevenness caused by such porosity prohibits a precise transference of the pattern through the curable resin layer.

Accordingly, the substrate disclosed by Gray III et al. cannot be used in the present invention or in Kawaguchi et al. in which the same inconveniences take place as in the present invention.

Therefore, claims 2, 3(2)-5(2) and 6 are novel and non- obvious over Kawaguchi et al. in view of Gray III et al.

Claim 7 is rejected under 35 U.S.C. §103(a) as being unpatentable over Kawaguchi et al. and Gray, III et al. as applied to claim 2 above, and further in view of Kanki et al. (U.S. Patent No. 6,040,356) (Office action paragraph 4).

Reconsideration of the rejection is respectfully requested.

The difference between the present invention and Kanki et al is shown below:

	Kanki et al.	Present invention
Object	Decorative material such as floor surface or a wall surface (Col. 1, line 6)	Continuous sheet for optical use
Substrate	Base sheet having release properties	Release properties are not required since the substrate is not removed from the release sheet having a three-dimensional pattern.
Matter to be transferred	Transfer layer formed from a durable gravure ink (The durable gravure ink *per se* is moved.)	Three-dimensional pattern formed on the release sheet (The release sheet *per se* is not moved.)

As is apparent from the foregoing, the present invention and Kanki et al. are intrinsically different from each other in all respects of object, construction and effects, especially in respect of the transfer mechanism.

Therefore, there is no suggestion to apply materials disclosed by Kanki et al. to the substrates in Kawaguchi et al. and Gray III et al., and claim 7 is novel and non-obvious over Kawaguchi et al., Gray et al. and Kanki et al., taken separately or in combination.

Regarding the Response to Amendment (Office action paragraph no. 5)

The Examiner points out that the declaration is not commensurate in scope with the claims in that the declaration is directed to an optical sheet with a convex/concave prism while the claim only

requires a three-dimensional structure.

However, first, it must be kept in mind that the convex/concave prism is the most typical example of the three-dimensional patterns, as apparent from the fact that this pattern is widely used in displays of liquid crystal equipments.

Second, Kawaguchi et al. also describes a convex/concave prism in FIG. 4 and in Example 3. As stated above, the present invention is superior to the Kawaguchi et al. invention by the two requirements as set forth below and such superiority can be demonstrated in physical data when the convex/concave prism was selected;

(a) transcriptional properties, i.e., heat resistance in the specific test conditions, and

(b) mechanical properties, i.e., windability in a form of cylinder of the specific number of inches in diameter.

That is, in the case of technology like the present invention, it is necessary to decide its superiority or inferiority by evaluating the preciseness of a pattern transferred. It is often insufficient to evaluate the pattern with the naked eye and thus it is desirous to indicate it by numerical values. In the case of the prism, it is possible to indicate the preciseness of the pattern transferred by numerical values of light converging performance of the prism (Page 22, lines 12-14 of the present specification). In the case of other three-dimensional patterns, it is not so easy to evaluate the patterns transferred by numerical values.

It is necessary to raise heat resistance of a release sheet in order to enhance the performance of a thermoplastic optical product having a pattern transferred from the release sheet (Page 3, lines 10-15

of the present specification). In this case, if a curable resin is chosen by those of high glass transition temperature, the obtained release sheet becomes rigid to thus lower the windability to a roll.

Attention is drawn to the fact that this windable diameter is not a diameter capable of paying-out, but is determined by whether the obtained thermoplastic resin optical product transferred from the curable resin release sheet causes scattering by cracks generated on an angle or a curved angle of the prism. As shown by Comparative Example 2 of the Declaration, even when windable at a 12-inch diameter, slight scattering is seen. When the 12-inch diameter is reduced to a 10-inch diameter, fine cracks cause on an apex angle. Accordingly, the limitation should be determined by whether it is windable or not at a 12-inch diameter. In other words, windability should be determined not by whether it is possible to be paid-out, but by whether fine cracks causing scattering take place after transference. That is definitely supported by the fact that in all of the Comparative Examples shown in the Declaration, optical products are rolled into a cylindrical form with a 14-inch diameter, namely, pay-out from the same diameter without causing cracks, the optical products after transference have fine cracks. As stated above, windability at a 12-inch diameter is a critical factor giving a criterion for whether or not there is generation of cracks on the optical products.

Next, heat resistance is judged by a heat seal test measured under similar conditions caused by pressing by use of an extrusion laminator, and this is based on the fact that it is possible to strictly evaluate a change in optical shape by an optical observation. In the case of a prism, in particular, a change in an inclined face of the prism is observed by reflection at the backside at an incident angle

of 60 degrees (Page 10, line 18 to page 11, line 1 of the present specification), so that a change in surface of the release sheet is strictly observed as a surface-gloss. Especially, 30 % in a change in a surface-gloss is a critical limitation exhibiting a change in an inclined face of the prism.

As stated above, windability in a form of cylinder of 12 inches diameter or below and heat resistance expressed by 30 % or below of a change in a surface-gloss under the specific test conditions are both critical elements which make the curable resin release sheet of the present invention possible to carry out industrially and commercially. Those two limitations cannot be found out without extensive experimentation, which supports Applicants assertion of non-obviousness of the present invention.

With respect to newly added claim 8

The resins recited in claim 8 are preferable resins used in the present invention and they are neither mentioned nor suggested by Kawaguchi et al.

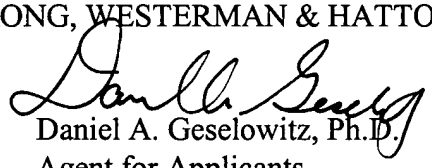
Applicants therefore submit that claim 8 is novel and non-obvious over the cited references.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants undersigned agent at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

ARMSTRONG, WESTERMAN & HATTORI, LLP



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